

Installation Instructions

(Original installation instructions)



DS2 System

Creation of a complete manual for the entire end product

These installation instructions are only intended to be used by the end-product manufacturer. They should not be given to the operator of the end product. The factual information contained within may be used as a basis when creating the end-product manual.

The warning and danger notices are best suited for use in the end product's manual. However, it is not sufficient to simply follow these notices. You should also carry out an internal risk assessment for your end product. This can then be used as the basis for the safety notices in your manual.

These instructions do not contain all information required to safely operate the end product. They only describe the installation and operation of the drive as partially completed machinery.

The instructions are intended for the technicians responsible for manufacturing an end product and not for the operators of the end product.

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Table of Contents

| | |
|---|-----------|
| Creation of a complete manual for the entire end product | 2 |
| Manufacturer address | 2 |
| Table of Contents | 3 |
| 1 General Information | 5 |
| 1.1 About these installation instructions | 5 |
| 1.2 Safety notices within the installation instruction and the operating instructions | 5 |
| 1.3 Conventions used | 5 |
| 2 Safety notices | 6 |
| 2.1 Proper and intended usage | 6 |
| 2.2 Selection and qualification of personnel | 7 |
| 3 Description of system components | 8 |
| 3.1 Complete installed system | 8 |
| 3.3 SMARTneo control unit | 9 |
| 3.4 Handsets | 9 |
| 3.5 Lifting columns | 9 |
| 3.7 Table frame | 11 |
| 4 System configurations | 12 |
| 4.1 SMARTneo control unit with two lifting columns and handset | 12 |
| 4.2 Product labelling | 12 |
| 5 Installation | 13 |
| 5.1 Safety notices to observe during installation | 13 |
| 5.2 Positioning the frame | 15 |
| 5.3 Mounting the lifting columns | 16 |
| 5.5 Mounting the side brackets to the frame | 17 |
| 5.6 Mounting the feet to the columns | 17 |
| 5.7 Mounting the tabletop to the frame | 18 |
| 5.8 Installing the handset to the tabletop | 19 |
| 5.9 Mounting the control unit | 20 |
| 5.10 Connections to the control unit | 21 |
| 5.11 Mains power connection for the control units | 22 |
| 6 Initial commissioning | 23 |
| 6.1 Performing a position reset procedure | 23 |
| 7 Operations | 23 |
| 7.1 General information | 23 |

| | | |
|-------------|---|-----------|
| 7.2 | Operating the HSCO handset | 25 |
| 7.3 | Operating the HSU handset | 26 |
| 7.4 | Operating the Motion Assist handset | 27 |
| 7.5 | Operating the TOUCHbasic-inlay handset | 28 |
| 7.6 | Operating the TOUCHbasic handset | 29 |
| 7.7 | Operating the TOUCHfx handset | 30 |
| 7.8 | Operating the TOUCHinlay handset | 32 |
| 8 | Troubleshooting | 33 |
| 8.1 | Malfunctions | 33 |
| 8.2 | Error messages on the handset's display | 34 |
| 8.3 | Error messages, as indicated by clicking tones from the control unit | 36 |
| 9 | Maintenance and cleaning | 36 |
| 9.1 | Maintenance | 36 |
| 9.2 | Cleaning | 36 |
| 10 | Technical specifications | 37 |
| 10.1 | Technical specifications for the table system | 37 |
| 10.2 | Technical specifications for the control unit | 37 |
| 10.3 | Technical specifications for the lifting columns | 37 |
| 11 | Disposal | 37 |
| 11.1 | Packaging material | 37 |
| 11.2 | Drive components | 37 |
| | Declaration of incorporation/installation | 38 |
| | EU Declaration of Conformity | 39 |

1 General Information

1.1 About these installation instructions

These installation instructions are not specific operating instructions for the end product. Rather, they describe the functions of the handsets and the installation of the DS2 system. These components include:

- DD lifting columns
- Handset
- SMARTneo control unit
- Frame and frame sides
- Table feet

These instructions will help you to minimize danger, repair costs and down times. They will also help you to maximize the reliability and lifespan of the end product.

NOTICE

Please also refer to the installation instructions (leaflet) supplied with each DS2 system.



CAUTION

The notices in these instructions must be followed! Following the guidelines during installation and connection procedures will help to minimize:

- The risk of accident and injury, and
- Damage to the drive system or the end product.

These instructions have been written with due care and attention. However, we cannot guarantee that the data, images and drawings are complete and correct nor do we accept any liability for the information contained therein, unless required by law.

- ▶ We reserve the right to make unannounced technical changes in the course of our continual product improvement process!

1.2 Safety notices within the installation instruction and the operating instructions

The manufacturer of the complete machine (the end product) is only permitted to operate this system (by itself an incomplete machine):

- When the end product (for which the system is intended) is in compliance with all protective measures specified in the Machinery Directive 2006/42/EC, and
- When the manufacturer expressly declares the compliance of the end product.

The manufacturer of the end product must create a manual for the users of that product. The safety notices in the end-product manual must be written based on the end product's risk assessment.

1.3 Conventions used

Notices which do not relate to safety are indicated in these instructions with a symbol:

- ▶ Triangular notice symbol

1.3.1.1 Explanations of warning notices



CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices which are not related to personal injury but may result in damage to the product or surroundings.

2 Safety notices

2.1 Proper and intended usage

The DS2 system should be used for adjusting the height of tables together with the SMARTneo control unit and the DewertOkin DD lifting columns.

It may only be used for applications where unintended motion cannot lead to damage.

It may only be used in dry rooms.

A height-adjustable office desk (with no tabletop*) is suitable:

- For office work in a sitting position,
- For office work while standing,
- For office work in both sitting and standing positions,
- When a tabletop suitable for the DS2 system is already present. *

* The tabletop will be provided and installed by the manufacturer of the end product.



CAUTION

Risk of accident

The DS2 system should only be used for the purpose described above. Any other use is forbidden. Improper usage can lead to accidents or destruction of the unit. Such non-approved applications will lead immediately to the expiration of all guarantee and warranty claims on the part of the end-product manufacturer against the manufacturer.

2.1.1.1 Improper usage

Be sure to follow the notices below concerning improper usage. You should include them in your product manual in order to inform the users of your end product.

The DS2 system should not be used:

- With a medical product, or installed in a medical product,
- As a power source for toys or games,
- In a moist environment, or
- Outdoors.

NOTICE

When installing and operating the lifting column, please note the following:

- Handle the lifting column with care!
- Do not drop the lifting column vertically to the ground.
- Do not tilt the lifting column sideways and let it fall to the ground.
- Do not subject the lifting column to lateral shock loads during the installation.

The DS2 system can be used by children of 8 years and older, persons with reduced physical, sensory or mental capabilities, or persons with lack of experience or knowledge when they are supervised or instructed concerning the safe use of the system and when they understand the resulting risks. Do not allow children to play with this system. The cleaning and maintenance must not be carried out by children without supervision.

- ▶ You should only use spare parts which have been manufactured or approved by DewertOkin. Only these parts will guarantee a sufficient level of safety.

**CAUTION****Danger of pinching/crushing injuries!**

There is a danger of being crushed when the table position is changed. This is particularly true when there is no protective mechanism guarding against crushing injuries. However, crushing injuries may even occur in exceptional cases when a safety guard is installed. Make sure that there are no persons within the danger zone and that nobody reaches into the danger zone. This also applies in the following situations:

- In the event of a malfunction, the table may move a bit during an adjustment before the safety shutdown mechanism triggers. This could result in a crushing injury.
- The impact protection mechanism is not active during resets and end-position queries. This could result in a crushing injury.

2.2 Selection and qualification of personnel

The installation of this system in the end product may only be performed by qualified personnel. You should only install this system when you are qualified to do so. Otherwise, a properly qualified person should be found for this task.

3 Description of system components

This system uses lifting columns to adjust the height of tables. Adjustments are made using a handset that is mounted on the table and the SMARTneo control unit.

Your DS2 system variant may differ by:

- The type of handsets,
- The type of lifting columns,
- The type of control unit.

3.1 Complete installed system

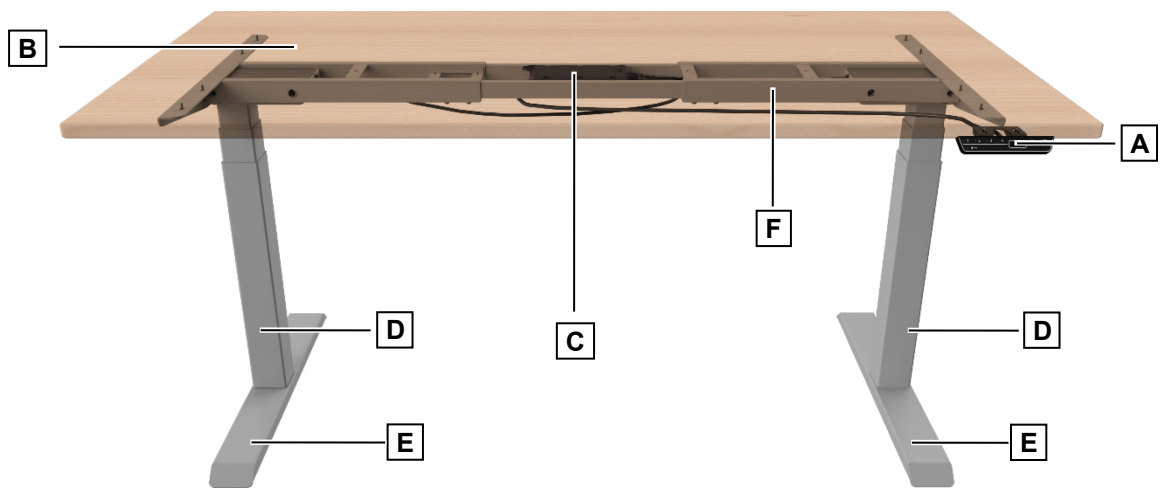


Figure 1 Example: DS2 system with two lifting columns

- | | |
|-------------------------|---|
| A Handset | B Tabletop (not in the scope of the delivery) |
| C SMARTneo control unit | D Lifting column |
| E Table feet | F Frame |

3.1.1 Dimensions

The mounted system, without tabletop:

- Max. width of frame: 1100/1350 – 1800 mm (infinitely variable; refer to section 5.3)
- Max. transverse extension: 575 mm
- Max. permissible tabletop size: 2000 x 800 mm
- Max. load for the frame: 120 kg (including tabletop)
- Max. lifespan: 10,000 cycles (with load)

3.3 SMARTneo control unit

The SMARTneo control unit is used to adjust the two lifting columns.

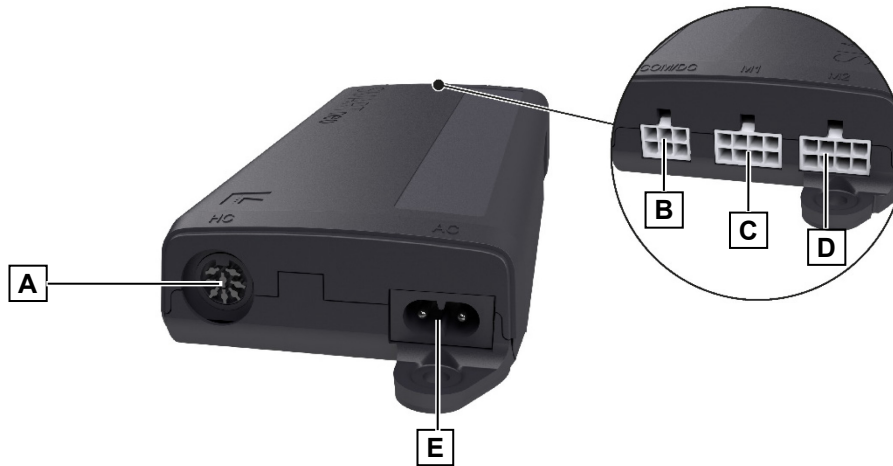


Figure 2 SMARTneo control unit

- | | | | |
|---|----------------------------------|---|----------------------------------|
| A | Connection for the handset | B | COM/DC connection |
| C | M1 connection for lifting column | D | M2 connection for lifting column |
| E | AC power supply connection | | |

3.4 Handsets

Various handsets, some with extended functionality, are available for the DS2 system. The handset is used to adjust the table height and (optionally) move to saved positions. It is connected directly to the control unit. Refer to chapter 7 for more information about the key assignments and functionality.

3.5 Lifting columns

The DS2 system is available with the DD lifting column. The main components of the DD lifting columns are the electric motor, the telescopic columns for adjustments, the outer support column, and the connecting cable. The frame and side brackets are attached to the column head while the feet are attached to the foot end of the lifting column. Positional sensors are built in to allow for synchronized adjustments with multiple columns.

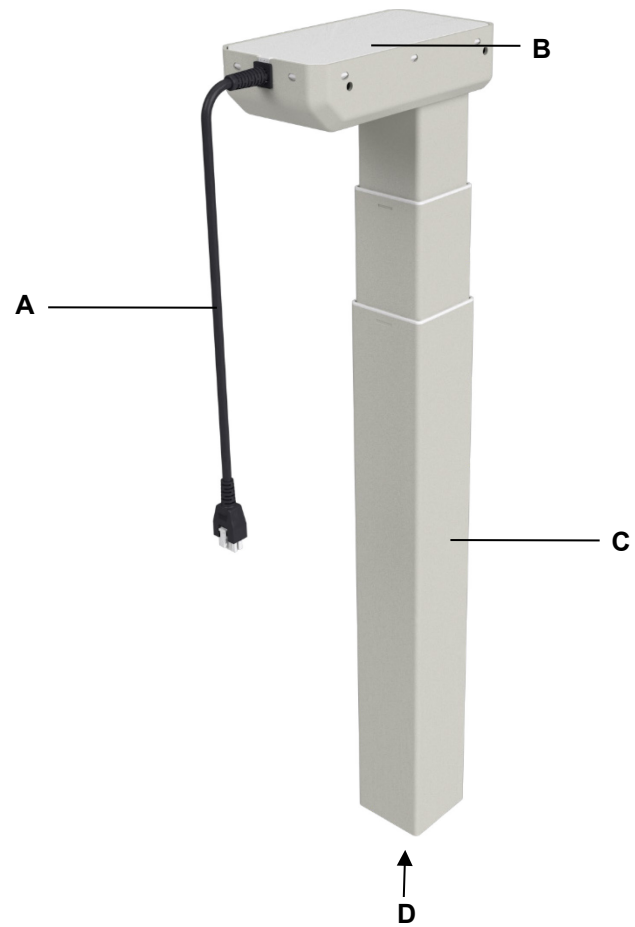


Figure 3 Main components of the DD lifting columns

- | | |
|---|-------------------------------------|
| A Connection cable | B Motor case |
| C Outer column with one or two internal telescopic columns | D Base of the lifting column |

3.7 Table frame

The DS2 system comes with a frame that includes the feet, frame sides and cross-beams.

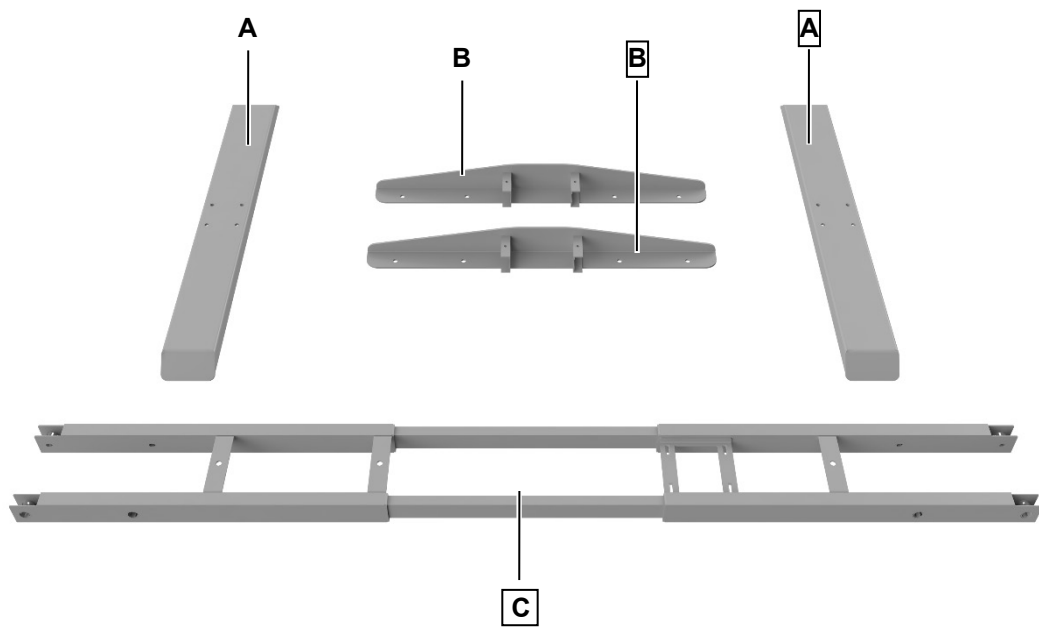


Figure 4 Table frame components

A Table feet

B Frame sides

C Cross-beams (adjustable length)

4 System configurations

The DS2 configuration with two lifting columns is described below:

4.1 SMARTneo control unit with two lifting columns and handset



4.2 Product labelling

4.2.1 Ratings plates

A ratings plate (or type label) on each control unit, handset and lifting column specifies the exact name and serial number. It also states the technical specifications valid for that particular component.

5 Installation

5.1 Safety notices to observe during installation

Basic safety rules must be followed in order to ensure that the end product can be continually operated in a safe manner. These rules must be observed while using the end product and while installing the control unit, the handset and the lifting columns in the end product.

5.1.1.1 Avoiding electrical faults

Be sure to consider the length of the power cord when designing the dimensions for your end product in order to minimize the associated risks.

5.1.1.2 Routing the electrical cables

When routing the cables, be sure that:

- The cables cannot get jammed or damaged.
- No mechanical load (such as pulling, pushing or bending) will be put on the cables.
- All cables are secured using sufficient strain relief and kink prevention methods.

5.1.2 Reliability

The safety and reliability of the end product containing DewertOkin components can be ensured by using the proper construction methods as described below.

5.1.2.1 Overheating

A thermal monitor switches the control unit off if it overheats.



CAUTION

The control unit is equipped with a thermal monitor (circuit breaker) that triggers when the unit overheats. If this has triggered, remove the control unit from the power supply and allow it to cool down. Wait for about 15 minutes and reconnect. If the control unit still does not function, please contact your supplier or sales agent.

5.1.2.2 Avoiding fatigue fractures

Install the lifting column in the end product so that it is properly aligned. This will help prevent shear stress.

Do not position the lifting column at a slanted angle when installing it in the end product. A slanted angle between the intended direction of movement of the end product and the lifting column's direction will create shear stress and could lead to a fatigue fracture.

5.1.2.3 Avoiding a pinching hazard

When designing your product, you should take the lifting column's adjustment movement into account with passive safety mechanisms and with the appropriate safety notices in your operating instructions.

Install the lifting columns so that none of the positions where shear and pinch hazards exist are accessible externally. This will ensure passive safety. Make sure that your operating instructions inform the user of these hazard points.

Structural modifications and improper installation which do not follow the installation steps or the safety instructions found in these installation instructions may result in serious injuries. Structural modifications may only be made after consulting with and receiving consent from DewertOkin.

NOTICE**Compliance with the intended usage and other regulations**

Any further processing of the products that contradicts the proper and intended usage is forbidden. The manufacturer or installer of the end product must ensure that all legal and regulatory requirements regarding the end product's manufacture, installation and customer support are followed.

5.1.2.4 Verifying the product code**Check that the product code matches your specifications:**

The system's product code is in the format DSx.yyy.z, whereby:

x = desk system type (number of columns per desk)

yyy = lifting column type

z = number of sections (2 or 3 telescoping sections) in the lifting column

Thus, the system product code DS2.DD351.2 designates a system with two columns, using the 351-type lifting columns, with 2 inner telescoping sections per column

5.1.3 Selecting the tabletop

The DIN Technical Report 147 describes the following information:

- Corner and edge design
- Exterior surfaces
- Surface brightness
- Surface finish
- Min. 3 mm edge radius

This information shall be considered binding when selecting the tabletop.

5.1.4 Ergonomics

The operating instructions that are created for the end product must provide instructions for an ergonomically correct installation where the handsets and table are freely accessible.

5.1.5 Use of the system by the end customer

The operating instructions for the end customer must refer to standards regarding:

- Standards for usage, arrangement of equipment in the working area, the planned activities and the working postures and positions
- Standards for describing the adjustment mechanisms with instructions for ergonomic adjustments

Please refer to the guidelines for the design of screens and office workstations from the German Trade Association for Printing and Paper Processing (BGI 650).

5.2 Positioning the frame

The length of the frame can be adjusted from 1100/1350 mm to 1800 mm. The length of 1100 mm may only be reached when the guide sleeves are not used. When the guide sleeves are inserted, the minimum width is 1350 mm. Refer to section 5.3.

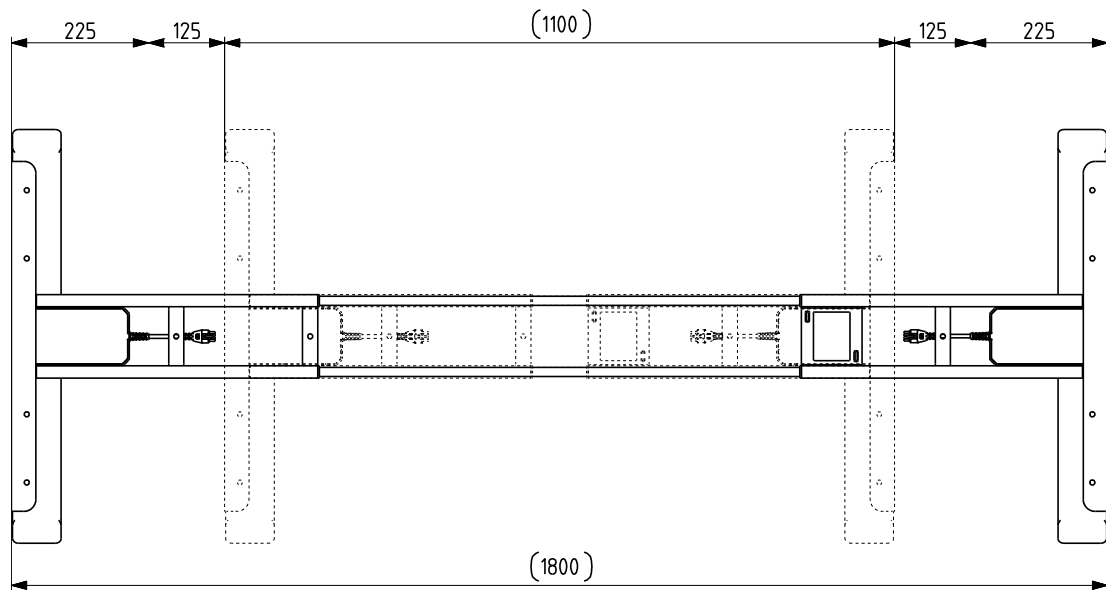


Figure 5 Adjusting the length of the frame

- 1 Lay the frame out flat on the floor.
- 2 Loosen the 8 screws which secure the 2 connecting rods (2 screws at each end).
- 3 Slide the frame out evenly from both sides, until the proper length has been reached.
- 4 Tighten the 8 screws so that the connecting rods are secured in position.

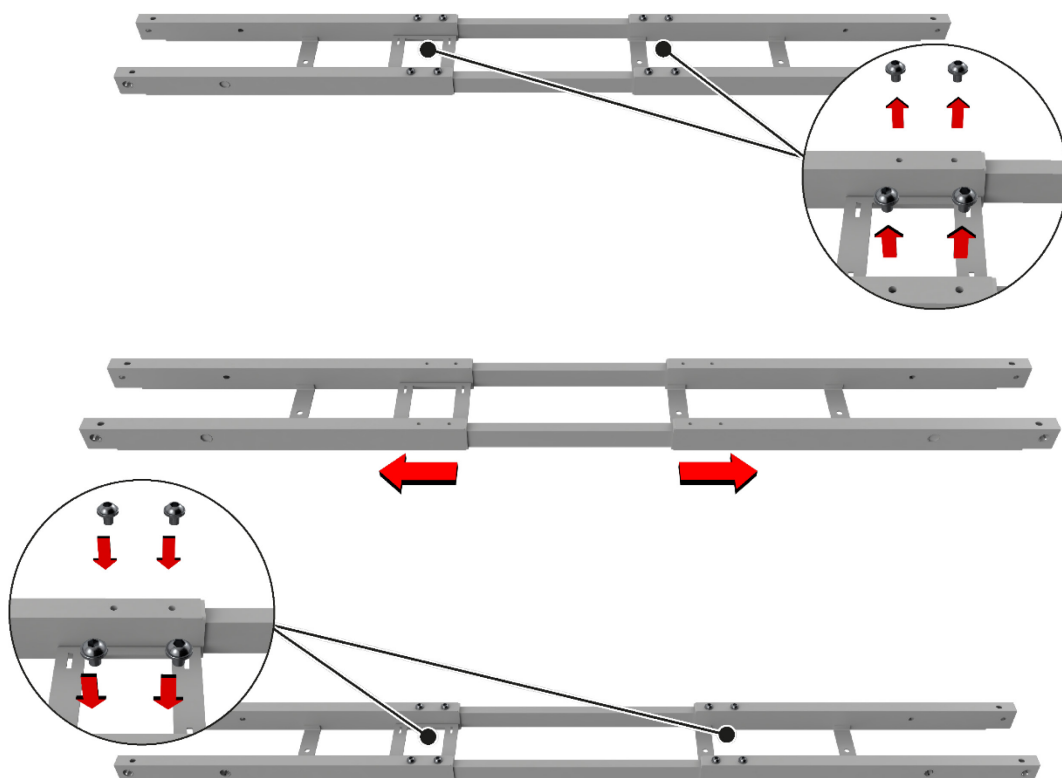


Figure 6 Adjusting the length of the frame

5.3 Mounting the lifting columns

Before installing and connecting the lifting columns, make sure that you are observing all of the safety notices found in the "Safety notices to observe during installation" section.

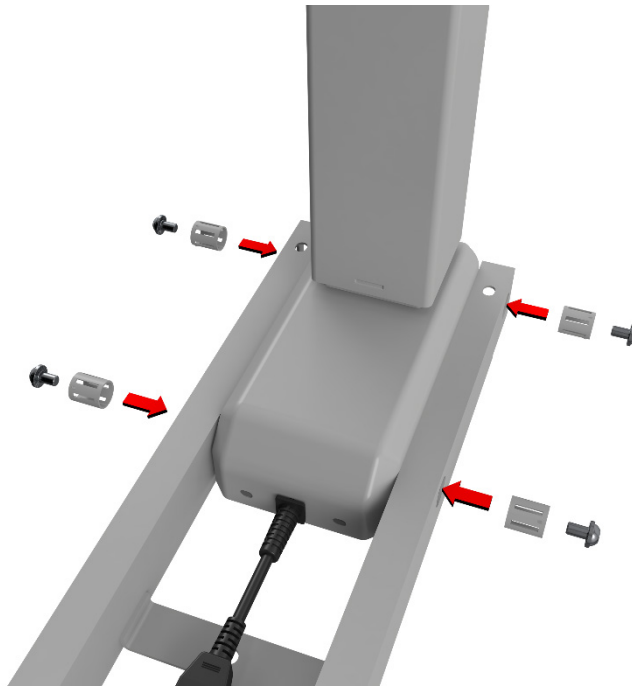


Figure 7 Mounting the lifting columns to the frame

- 1 Insert the columns into both sides of the frame.
- 2 Line up the holes in the frame and columns.
- 3 Insert the guide sleeves into the holes (4 for each column). (See notice, below.)
- 4 Tighten the screws (4 M6x10 for each column).

NOTICE

Do not use the guide sleeves if you have adjusted the frame to a length less than 1350 mm. A length of 1100 mm can only be reached when these guide sleeves have not been inserted.

NOTICE

Do not use excessive torque on the screws.

5.5 Mounting the side brackets to the frame

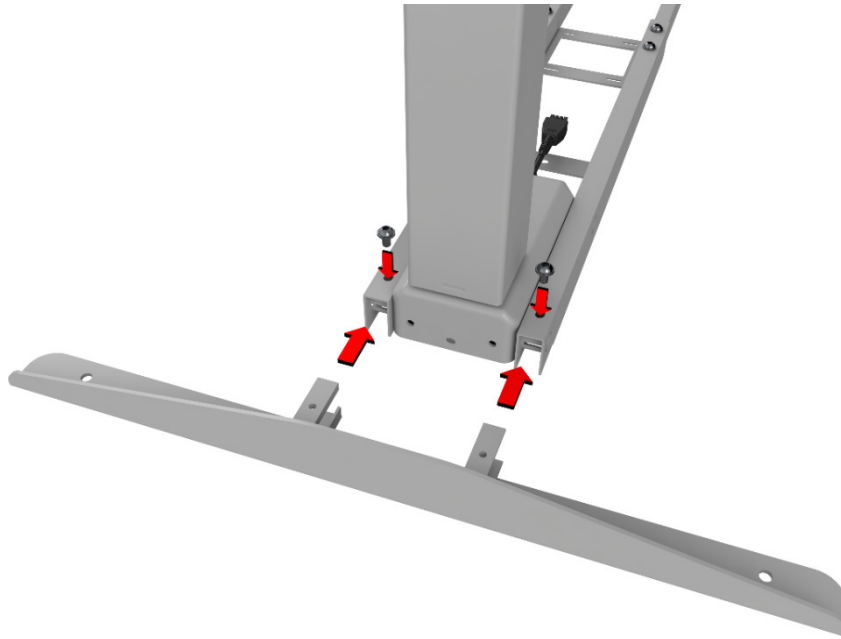


Figure 8 Screwing the tabletop onto the side brackets

- 1 Insert the side brackets onto both sides of the frame as shown.
- 2 Tighten the screws. (Use 2 M6x10 screws for each side bracket.)

NOTICE

Do not use excessive torque on the screws.

5.6 Mounting the feet to the columns

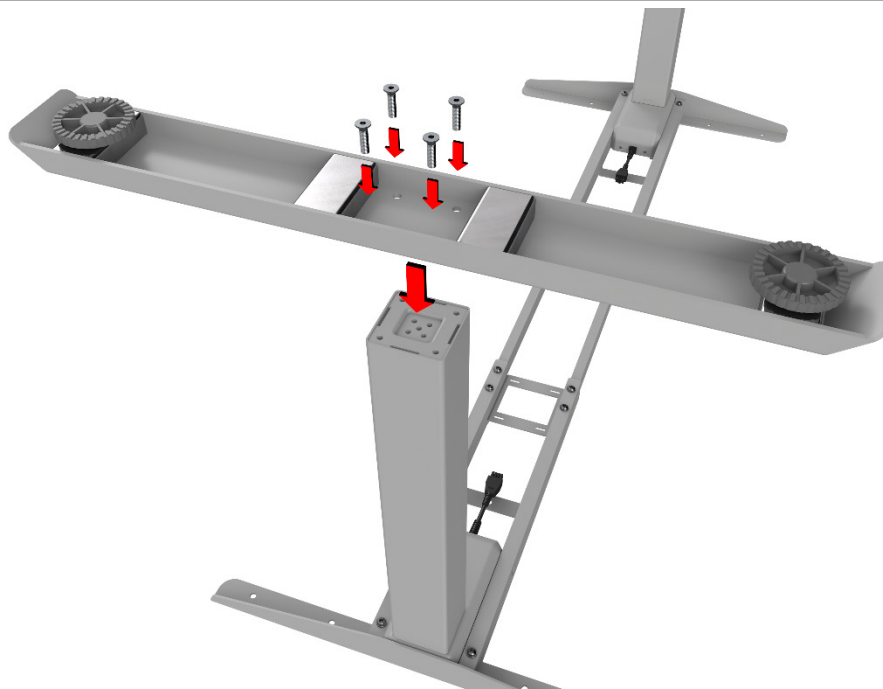


Figure 9 Screwing the tabletop onto the side brackets

- 1 Line up the screw holes on the feet with the holes in the end of the column.
- 2 Tighten the screws. (Use 4 M6x10 screws for each foot.)

NOTICE

Do not use excessive torque on the screws.

NOTICE

It is important that the screws do not penetrate more than 10 mm into the column. Longer screws could damage the internals of the column.

5.7 Mounting the tabletop to the frame

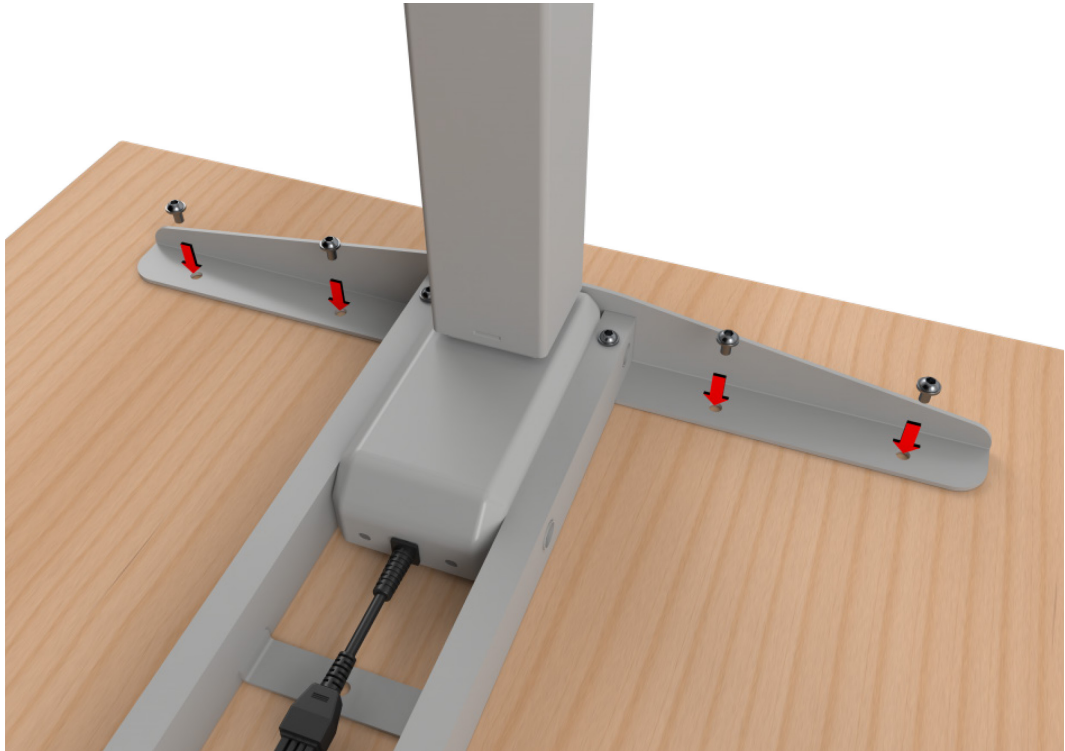


Figure 10 Screwing the tabletop onto the side brackets

- 1 Check that the frame length is suitable for your tabletop. We suggest that the left and right outer sides of the side brackets are 5 cm from the outer edge of the tabletop. Refer to section 5.2 for adjusting the length of the frame.
- 2 Insert the self-tapping screws through the holes on the side brackets and tighten into tabletop. (Use 4 ST4.8x16 screws on each side.)

5.8 Installing the handset to the tabletop

NOTICE

- The handset must be installed in an ergonomically correct position so that the user can reach it easily.
- When installing the handset, take into account the thickness of the tabletop.
- Use no more than 2 Nm when screwing the screws into the tabletop.

The following general instructions describe how to install a screw-mounted handset (based on the example of the HSU).

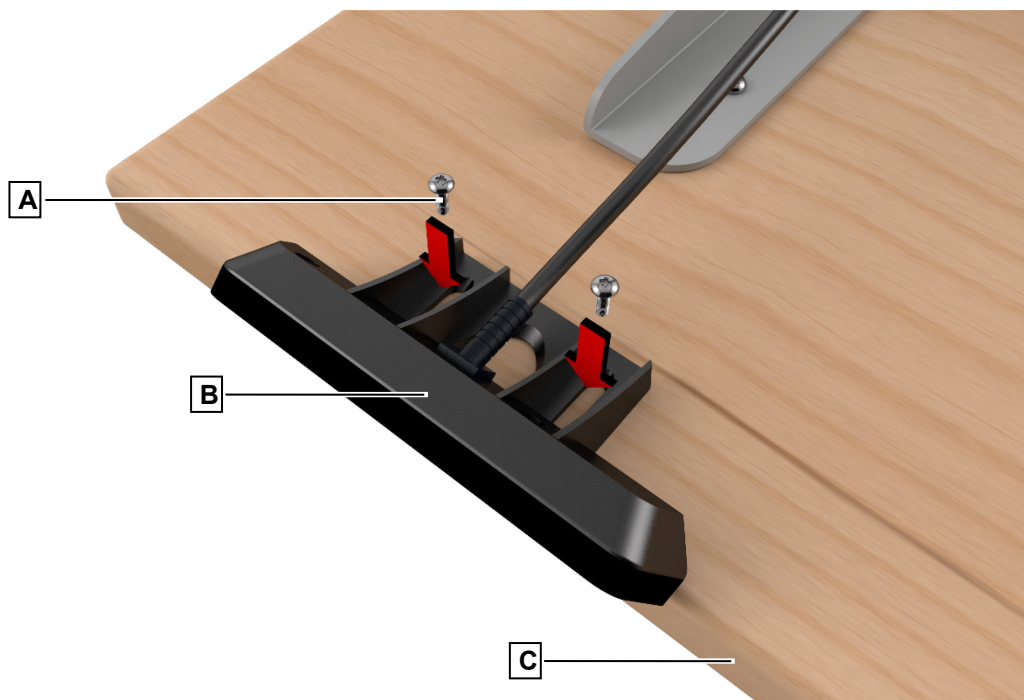


Figure 11 Example: Mounting the HSU handset

A Screws

B HSU handset (example)

C Tabletop (not included in delivery)

- 1 Position the handset under the front edge of the tabletop and mark the position of the mounting points.
- 2 Drill the holes into the tabletop.
- 3 Tighten the screws into the tabletop.
- 4 Route the cable as described in the handset's manual. Use strain relief as required.

5.8.1 Motion Assist handset

- ▶ The mounting dimensions for this handset can be found in the manual and technical drawing on the DewertOkin website at <https://www.dewertokin.com/products/office/handsets/motion-assist/>.

5.8.2 HSCO handset

- ▶ The mounting dimensions for this handset can be found in the manual and technical drawing on the DewertOkin website at <https://www.dewertokin.com/products/office/handsets/hSCO/>.

5.8.3 HSU handset

- ▶ The mounting dimensions for this handset can be found in the manual and technical drawing on the DewertOkin website at <https://www.dewertokin.com/products/office/handsets/hsu/> .

5.8.4 TOUCHbasic-inlay handset

- ▶ The mounting dimensions for this handset can be found in the manual and technical drawing on the DewertOkin website at <https://www.dewertokin.com/products/office/handsets/touchbasic-il/> .
- ▶ Refer to the handset's manual at <https://www.logicdata.net/product/touchbasic-inlay/> for more information about the milled cut-out for the tabletop and cable routing.

5.8.5 TOUCHbasic handset

- ▶ The mounting dimensions for this handset can be found in the technical drawing on the DewertOkin website at <https://www.dewertokin.com/products/office/handsets/touchbasic-dn/> .

5.8.6 TOUCHfx handset

- ▶ The mounting dimensions for this handset can be found in the technical drawing on the DewertOkin website at <https://www.dewertokin.com/products/office/handsets/touchfx/> .

5.8.7 TOUCHinlay handset

- ▶ The mounting dimensions for this handset can be found in the technical drawing on the DewertOkin website at <https://www.dewertokin.com/products/office/handsets/touchinlay/> .
- ▶ Refer to the handset's manual at <https://www.logicdata.net/product/touchinlay/> for more information about the milled cut-out for the tabletop and cable routing.

5.9 Mounting the control unit

NOTICE

When installing the control unit, take into account the thickness of the tabletop.

- ▶ Mount the control unit under the centre of the table. The best installation position is between the table frame. Make sure that the connecting cables can reach the control unit.
- ▶ Use raised-head screws of type 4.8xL (according to requirements of DIN 7981) with a 9.5 mm head diameter and of suitable length (2 mm + screw-in depth into the table). Tighten the screws using no more than 2 Nm of torque.



CAUTION

You should only install and uninstall the control unit when it is completely disconnected from any live current!

Install the control unit as shown in Figure 12:

- 1 Centre the control unit inside the frame, as shown.
 - 2 Mark the drill holes.
 - 3 Use a suitable drill to drill the two holes.
 - 4 Screw the control unit to the tabletop.
 - 5 Route all connecting cables under the tabletop so that they cannot be pinched during the table's lifting movements.
- The mounting dimensions for this control unit can be found in the technical drawing on the DewertOkin website at <https://www.dewertokin.com/products/office/control-units/smartneo/>.

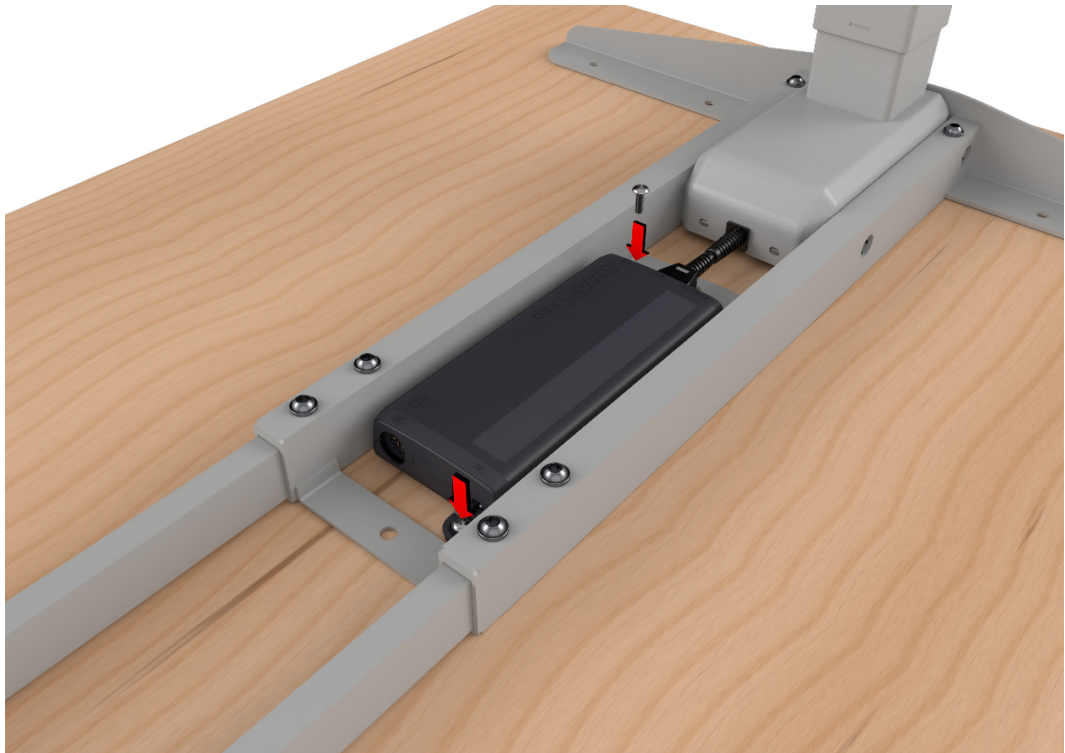


Figure 12 Mounting the SMARTneo control unit

5.10 Connections to the control unit



CAUTION

Electrical components should be connected or disconnected only when the power supply cord is unplugged.

- There is a delay after the supply voltage is applied before the system actually turns on. Wait at least seven seconds before beginning the commissioning.

5.10.1 Connecting the lifting columns and the handset to the control unit

The lifting columns and the handset are both connected to the front of the SMARTneo control unit. The following illustration shows the location of these connections.

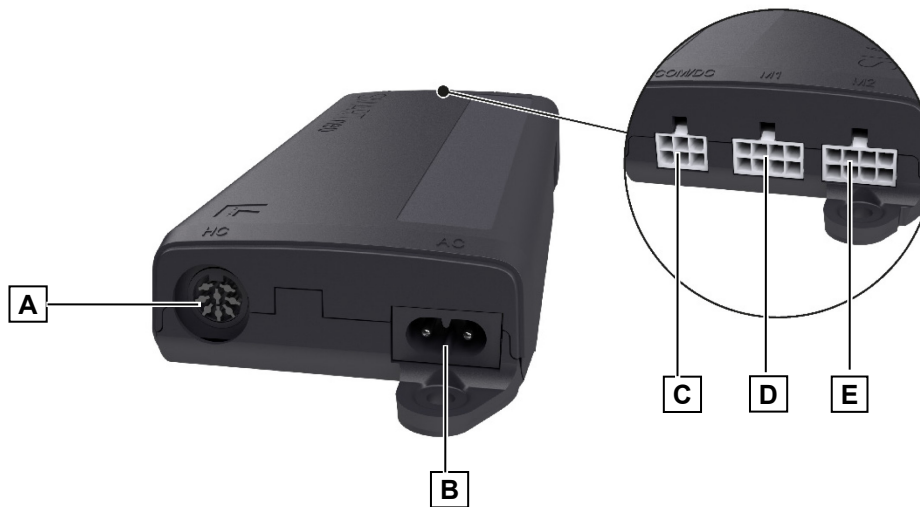


Figure 13 Connections on the SMARTneo control unit

- | | |
|-----------------------------|---------------------------------|
| A Handset connection | B Mains power supply connection |
| C Cascading connection | D Lifting column connection |
| E Lifting column connection | |

NOTICE

Be sure to connect the power cable into the control unit after all other connections are plugged in.

5.11 Mains power connection for the control units

Connect the power cable into the control unit after all other connections have been plugged in. The appropriate power cord is included, depending on the regional version (USA, continental Europe, the UK, Japan or Australia).

- ▶ You will need to carry out a reset movement on the control unit (refer to section 6.1) after the initial commissioning.



CAUTION

Please follow these operating instructions carefully. You could be injured by fire or electrical shock if you do not follow these assembly instructions.



CAUTION

Only use the proper power cable that is permitted in your country. Be sure to use the correctly shaped plug, as shown in the following illustration.

6 Initial commissioning

NOTICE

The DS2 system must first be fully installed (refer to chapter 5) and all components must be connected before you can carry out the initial commissioning.

It is not possible to connect a second control unit or additional lifting columns later.

NOTICE

There is a delay after the supply voltage is applied before the system actually turns on. Wait at least seven seconds before beginning the commissioning.

NOTICE

You must carry out a reset (as described below) after you disconnect the cable that connects a component (drive, handset, etc.) to the control unit for the DS2 system.

6.1 Performing a position reset procedure




A position reset is used to align the position of the drives (columns) within the table system. It is required before initial usage of the table system.



CAUTION

Danger of pinching/crushing injuries!

No system-based safety mechanism is enabled during the reset process.

- 1 Press and hold the  key (adjusting downward) until the tabletop moves all the way down.
- 2 Release the  key.
- 3 Press the  key again.
- 4 The lifting column moves briefly downwards, then immediately upwards and then comes to a stop.
- 5 The reset is now finished.

7 Operations

These installation instructions do not contain all information required for the safe operation of the end product. They only describe the installation and operation of the system components (as defined in the Machinery Directive as a "partially assembled piece of machinery").

7.1 General information



CAUTION

Danger of pinching/crushing injuries!

Make sure that there are no persons (especially children) or objects located in the range of movement while the table is moving.

7.1.1 Delayed start-up

- ▶ Note that this system switches on with a slight delay after the power cord is plugged in and voltage is applied. Wait at least seven seconds before beginning use.

7.1.2 Power-on time / intermittent operations

NOTICE

This system has been designed for intermittent operations. Intermittent operation is an operational mode where the drive must pause after a specified maximum period of operation (power-on time). This protects the drive from overheating. Extreme overheating can cause a malfunction.

- ▶ The ratings plate specifies the maximum power-on time and the required pause intervals.

7.1.3 Avoiding electrical risks

**CAUTION**

Make sure that all live (current-carrying) parts of the drive system and power supply cannot be touched.

7.1.4 Reducing the risk of overheating with the thermal monitor

**CAUTION**

The control unit is equipped with a thermal monitor (circuit breaker) that triggers when the unit overheats. If this has triggered, remove the control unit from the power supply and allow it to cool down. Wait for about 15 minutes and reconnect. If the control unit still does not function, please contact your supplier or sales agent.

7.1.5 Shutting down the system in an emergency

Pull out the power plug in order to shut off the DS2 system. The power plug must always be accessible during operations so that emergency shut-off is possible.

7.1.6 Avoiding cable damage

Be sure that your operating instructions inform the user about the possible cable risks.

NOTICE

The cables (in particular the electrical connection for the drives and the power supply cable for the drive system) must not be squashed or crushed. In order to prevent damage to the drive, no mechanical strain should be placed on the cables.

7.2 Operating the HSCO handset

Press the up or down key on the handset to raise or lower the table. Keep pressing the key until the desired height of the table is reached.

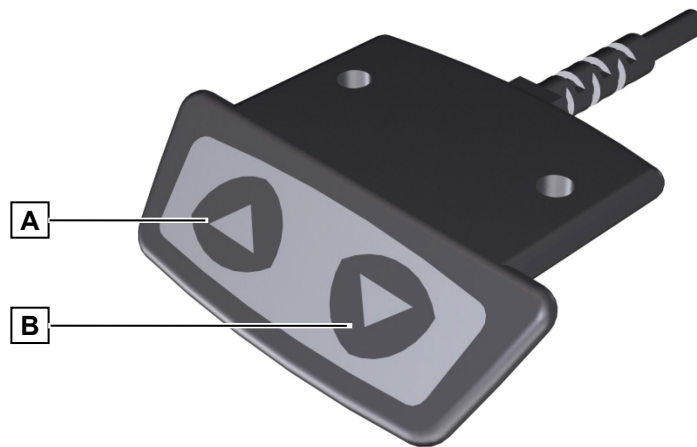




Figure 14 HSCO handset

A Key for adjusting upwards

B Key for adjusting downwards

7.2.1 Key assignments for the HSCO handset

| Button | Function |
|---|--|
|  | Adjusting upwards |
|  | Adjusting downwards or carrying out a position reset |

7.3 Operating the HSU handset

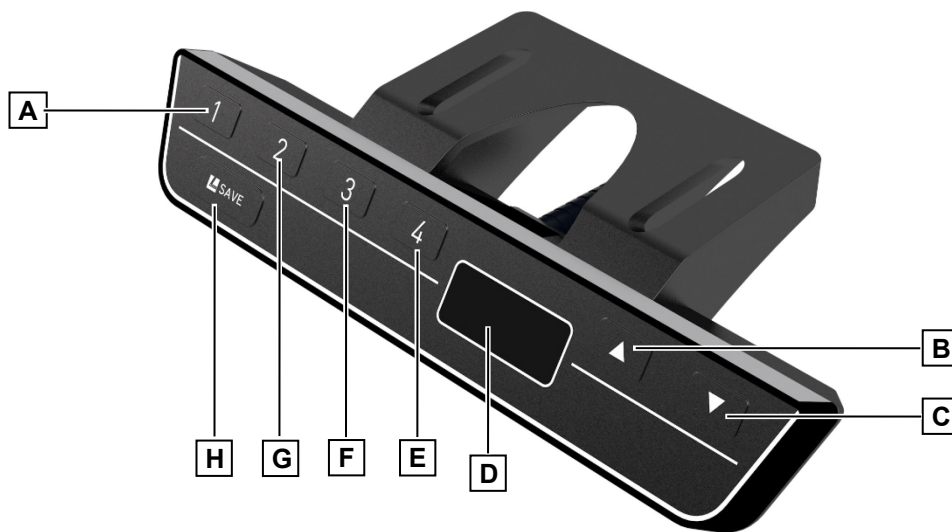


Figure 15 HSU handset

- | | | | |
|---|-----------------------------|---|---------------------------|
| A | Memory key 1 | B | Key for adjusting upwards |
| C | Key for adjusting downwards | D | Display of position |
| E | Memory key 4 | F | Memory key 3 |
| G | Memory key 2 | H | Save key |

7.3.1 Key assignments for the HSU handset

Press the up or down key on the handset to raise or lower the table. Keep pressing the key until the desired height of the table is reached.

| Key / indicator | Function | Key / indicator | Function |
|-----------------|---------------------|-----------------|--|
| | Display of position | | Memory key 4 |
| | Memory key 1 | | Save key |
| | Memory key 2 | | Adjusting upwards |
| | Memory key 3 | | Adjusting downwards or carrying out a position reset |

7.3.2 Saving a memory position

Any table position can be saved to a corresponding memory key using this function.

- ▶ When the control unit is turned on for the first time, all positions are equal to the smallest table position (the lower end position).
- ▶ Only one table position can be stored per memory key.

To save a position, proceed as follows:

- 1 Move the table to the position that you want to save. The position is shown on the display in cm.
- 2 Press the Save key. **S** – is now shown on the display.
- 3 Press the desired memory key (e.g. 2). **S2** is now shown on the display.
- 4 The current table position has now been saved for the selected memory key. A double click noise can be heard. The saved table position is displayed again after about 2 seconds.

7.3.3 Adjusting the table to a saved height position

This function allows you to set the table to a saved table position.

- 1 Press and hold the memory key that corresponds to the desired table position.
- 2 The table will move as long as the memory key is pressed. If you release the key before the saved position is reached, the table will stop immediately.
- 3 Release the key when the table has reached the saved position. The current (saved) position is shown on the display.

7.4 Operating the Motion Assist handset





Figure 16 Motion Assist handset

A Key for adjusting downwards

B Key for adjusting upwards

7.4.1 Key assignments for the Motion Assist

Press the up or down key on the handset to raise or lower the table. Keep pressing the key until the desired height of the table is reached.

| Button | Function |
|---|--|
|  | Adjusting upwards |
|  | Adjusting downwards or carrying out a position reset |

7.4.3 Saving a memory position

Two memory positions may be saved for the table. The table stops automatically during an adjustment when it reaches a saved position.

- ▶ Memory positions are over-written whenever the container stop positions are programmed! (Refer to the Motion Assist manual for information about programming the container stop positions.)
- ▶ Only one table position can be stored per memory key.

To save a position, proceed as follows:

- 1 Move the table to the position that you want to save.
- 2 Press both the up and down keys simultaneously for more than 5 seconds to save the position. A double click sound indicates that the control unit is in memory mode.
- 3 Save the memory position: For the upper memory position, press the up key until you hear a triple click. For the lower memory position, press the down key until you hear a triple click.
- 4 The memory positions are now saved.

7.4.4 Adjusting the table to a saved height position

- 1 Press and hold the up or down key until the desired memory position is reached.
- 2 To move beyond a memory position, press the key again and release it when the desired position has been reached.

7.5 Operating the TOUCHbasic-inlay handset

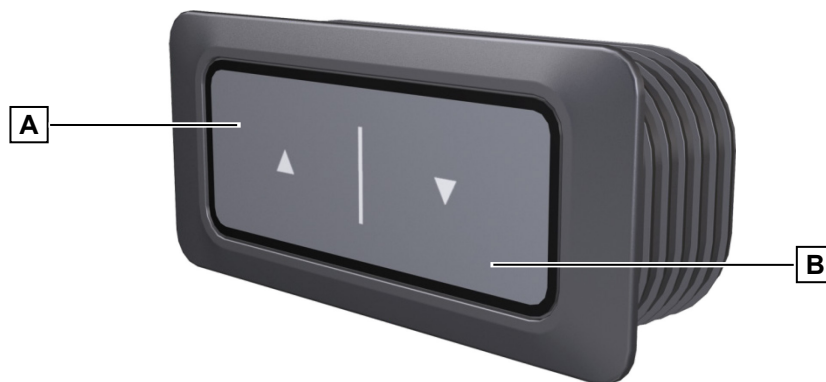




Figure 17 TOUCHbasic-inlay handset

A Key for adjusting upwards

B Key for adjusting downwards

7.5.1 Key assignments for the TOUCHbasic-inlay

Press the up or down key on the handset to raise or lower the table. Keep pressing the key until the desired height of the table is reached.

| Button | Function |
|---|--|
|  | Adjusting upwards |
|  | Adjusting downwards or carrying out a position reset |

7.6 Operating the TOUCHbasic handset





Figure 18 TOUCHbasic handset

A Key for adjusting upwards

B Key for adjusting downwards

7.6.1 Key assignments for the TOUCHbasic

Press the up or down key on the handset to raise or lower the table. Keep pressing the key until the desired height of the table is reached.

| Button | Function |
|---|--|
|  | Adjusting upwards |
|  | Adjusting downwards or carrying out a position reset |

7.7 Operating the TOUCHfx handset

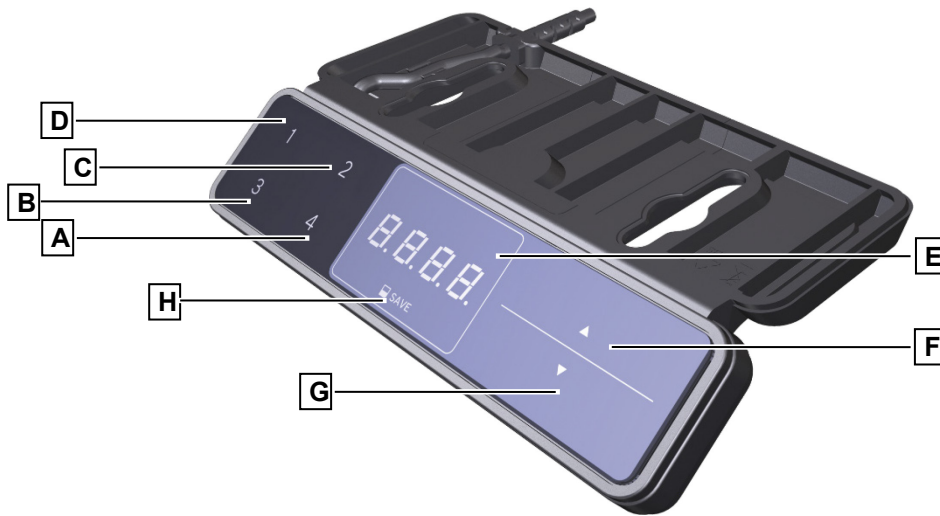

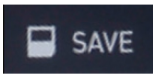

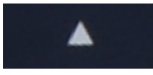

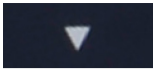



Figure 19 TOUCHfx handset

- | | |
|-------------------------------|-----------------------------|
| A Memory key 4 | B Memory key 3 |
| C Memory key 2 | D Memory key 1 |
| E Display of position | F Key for adjusting upwards |
| G Key for adjusting downwards | H Save key |

7.7.1 Key assignments for the TOUCHfx

Press the up or down key on the handset to raise or lower the table. Keep pressing the key until the desired height of the table is reached.

| Key / indicator | Function | Key / indicator | Function |
|---|--------------|--|--|
|  | Memory key 1 |  | Save key |
|  | Memory key 2 |  | Adjusting upwards |
|  | Memory key 3 |  | Adjusting downwards or carrying out a position reset |
|  | Memory key 4 | | |

7.7.2 Saving a memory position

Any table position can be saved using this function.

- ▶ When the control unit is turned on for the first time, all positions are equal to the smallest table position (the lower end position).
- ▶ Only one table position can be stored per memory key.

To save a position, proceed as follows:

- 1 Move the table to the position that you want to save. The position is shown on the display in cm.
- 2 Press the Save key. **S** – is now shown on the display.
- 3 Press the desired memory key (e.g. 2). **S2** is now shown on the display.
- 4 The current table position has now been saved for the selected memory key. A double click noise can be heard. The saved table position is displayed again after about 2 seconds.

7.7.3 Adjusting the table to a saved height position

This function allows you to set the table to a saved table position.

- 1 Press and hold the memory key that corresponds to the desired table position.
- 2 The table will move as long as the memory key is pressed. If you release the key before the saved position is reached, the table will stop immediately.
- 3 Release the key when the table has reached the saved position. The current (saved) position is shown on the display.

7.7.4 Activating the key lock function

The key lock function prevents you from moving the table if you accidentally press a key. It can be activated and deactivated by swiping across the bottom edge of the handset.

- ▶ The handset must be activated to enable the key lock function. To activate the display, simply press any key.

- 1 Swipe the display gently to the left or right in the vicinity of the keys. Do not press any of the keys!
- 2 The display shows the locked symbol:



The key lock function can be deactivated by swiping to the left or right again.

7.8 Operating the TOUCHinlay handset

The TOUCHinlay handset has two keys for the up/down adjustment movements, two memory keys, a save key and a four-character positional display.



Figure 20 TOUCHinlay handset

- | | |
|-------------------------------|-----------------------------|
| A Memory key 2 | B Memory key 1 |
| C Display of position | D Key for adjusting upwards |
| E Key for adjusting downwards | F Save key |

7.8.1 Key assignments for the TOUCHinlay

Press the up or down key on the handset to raise or lower the table. Keep pressing the key until the desired height of the table is reached.

| Key / indicator | Function | Key / indicator | Function |
|-----------------|--------------|-----------------|--|
| 1 | Memory key 1 | | Save key |
| 2 | Memory key 2 | | Adjusting upwards |
| | | | Adjusting downwards or carrying out a position reset |

7.8.2 Saving a memory position

Any table position can be saved using this function.

- ▶ When the control unit is turned on for the first time, all positions are equal to the smallest table position (the lower end position).
- ▶ Only one table position can be stored per memory key.

To save a position, proceed as follows:

- 1 Move the table to the position that you want to save. The position is shown on the display in cm.
- 2 Press the Save key. **S** – is now shown on the display.
- 3 Press the desired memory key (e.g. 2). **S2** is now shown on the display.
- 4 The current table position has now been saved for the selected memory key. A double click noise can be heard. The saved table position is displayed again after about 2 seconds.

7.8.3 Adjusting the table to a saved height position

This function allows you to set the table to a saved table position.

- 1 Press and hold the memory key that corresponds to the desired table position.
- 2 The table will move as long as the memory key is pressed. If you release the key before the saved position is reached, the table will stop immediately.
- 3 Release the key when the table has reached the saved position. The current (saved) position is shown on the display.

8 Troubleshooting

This chapter describes troubleshooting methods for fixing problems. If you experience an error that is not listed in this table, please contact your supplier or sales agent.

- ▶ A manual reset may be required if there was a power outage (or if the power cord was disconnected) during the height adjustment process. Refer to section 6.1.



CAUTION



Only qualified specialists who have received electrician training should carry out troubleshooting and repairs.

8.1 Malfunctions

| Problem | Possible cause | Solution |
|---|---|---|
| The drives are not functioning. | There is no mains supply voltage. | Connect the mains power supply. |
| | The drives are not connected. | Connect the motor's connecting cable to the control unit. |
| | A plug has a bad contact. | Make sure that the motor cable, the power supply and the handset are properly and firmly connected. |
| | A control unit or a handset is defective. | Please contact your supplier or sales agent. |
| The drives are running in only one direction. | There was a power outage during an adjustment movement or the power cable was disconnected during a movement. | Carry out the reset movement. |
| | The control unit, drive, or handset is defective. | Please contact your supplier or sales agent. |

| Problem | Possible cause | Solution |
|--|--|--|
| The control unit or handset is not functioning properly. | There is no mains supply voltage. | Connect the mains power supply. |
| | The handset is not connected. | Connect the handset. |
| | The control unit, power cable or handset is defective. | Please contact your supplier or sales agent. |
| | A plug has a bad contact. | Make sure that the plugs are firmly seated and properly connected. |

8.2 Error messages on the handset's display

| Displayed error message | Possible cause | Solution |
|---|--|---|
|  | The control unit is equipped with a thermal protective mechanism which has been triggered. | Wait until the control unit has cooled down and the message HOT is no longer displayed. The control unit is once again ready for operations. |
|  | There is an internal error in the control unit. | Proceed according to the number displayed after the E, as described in the error list below. |
| 00 | Internal error channel 1 | Unplug the control unit and contact your supplier or sales agent. |
| 01 | Internal error channel 2 | |
| 02 | Internal error channel 3 | |
| 12 | Malfunction channel 1 | Disconnect all connecting cables from the control unit. Find and correct the short circuit. Reconnect the control unit and resume operations. Connect the correct lifting column to the correct socket. Reconnect the control unit and resume operations. |
| 13 | Malfunction channel 2 | |
| 24 | Over-current at lifting column M1 | Remove the jammed objects from the range of movement. |
| 25 | Over-current at lifting column M2 | Table is overloaded: remove the excess load. |
| 48 | Over-current at drive group 1 | Please contact your supplier or sales agent. |
| 60 | Collision protection | |
| 62 | Over-current at control unit | |
| 36 | Plug detection at socket M1 | Connect the correct lifting column to the correct socket. |
| 37 | Plug detection at socket M2 | |
| 38 | Plug detection at socket M3 | Carry out the reset movement. |
| 61 | Lifting columns are incorrect | |

| Displayed error message | Possible cause | Solution |
|-------------------------|----------------------------------|--|
| 55 | Synchronization of drive group 1 | Remove the load from the table. |
| 56 | Synchronization of drive group 2 | Carry out the reset movement. If the error is still displayed after the reset, contact your supplier or sales agent. |
| 67 | The voltage is too high. | Unplug the control unit and contact your supplier or sales agent. |
| 70 | Changed drive configuration | <p>First option:</p> <p>Disconnect the mains power cable from the power supply and wait at least five seconds.</p> <p>Connect the mains power cable to the power supply.</p> <p>Carry out the reset movement.</p> <hr/> <p>Second option:</p> <p>Simultaneously press the Memory position 1 and 2 keys and the Tabletop up key. Hold the keys down for about ten seconds and then release them. S 1 is now shown on the display.</p> <p>Press down on the Tabletop up key until S 7 appears in the display.</p> <p>Press the Memory key.</p> <hr/> <p>Third option:</p> <p>Please contact your supplier or sales agent.</p> |
| 71 | Changed anti-pinch configuration | <p>Refer to error 70.</p> <hr/> <p>Disable the sensor unit:</p> <p>Remove a sensor unit from the control unit.</p> <p>The error E71 appears on the display.</p> <p>Verify that the sensor unit is no longer connected to the control unit.</p> <p>Press down on the Tabletop up key until the tabletop has reached its upper position.</p> <p>The control unit clicks three times: the sensor unit is now deactivated.</p> |
| 81 | Internal error | <p>Carry out the reset sequence.</p> <hr/> <p>Disconnect the mains cable from the power supply. Reconnect the power supply cable after a few seconds.</p> <hr/> <p>If this error is displayed multiple times:</p> <p>Unplug the control unit and contact your supplier or sales agent.</p> |

8.3 Error messages, as indicated by clicking tones from the control unit

| Number of clicks | Explanation | Solution |
|------------------|--|--|
| 2x | Normal operations (The system is working properly.) | - |
| 1x | Emergency mode (The lifting columns cannot be used in emergency mode.) | Check the LEDs and the error code on the display of the handset. |
| 3 – 6 | The last shutdown was incomplete. Forced reset movement. | Check the LEDs and the error code on the display of the handset. |

9 Maintenance and cleaning

- ▶ You should only use spare parts which have been manufactured or approved by DewertOkin. Only these parts will guarantee a sufficient level of safety.

9.1 Maintenance

- ▶ Periodic inspections should be carried out in accordance with the German Social Accident Insurance (DGUV) guidelines / provision 3. A qualified electrician should carry out this inspection.
- ▶ The following should also be checked frequently:

| Type of check | Explanation | Time interval |
|---|--|---|
| Look over the housing periodically for any signs of damage. | Check the housing for breaks or cracks. The IP-class protection will be impaired by any breakage or cracks. | At least every six months. |
| Look over the cables, wires and strain relief mechanisms. | Check the cables for pinching or shearing. Also check the strain relief and kink protection mechanisms, in particular after any mechanical load. | At least every six months. |
| Check the resistance of the protective earth and check for leakage current. | The leakage current and the protective earth resistance should be checked by a trained electrician. | At least every six months. |
| Check the function and safety of the electrical system. | A qualified electrician should carry out this inspection. | Periodic inspections can be carried out at intervals based on the risk assessment which you conduct for your end product. |

9.2 Cleaning

- ▶ Clean the DS2 system components using a dry anti-static cloth as often as needed.

NOTICE

- Always disconnect the power plug from the control unit before cleaning the system.
- Be sure that you do not damage the connecting cables during the cleaning.

10 Technical specifications

10.1 Technical specifications for the table system

- ▶ You can find the technical specifications for the table system on the DewertOkin website at <https://www.dewertokin.com/products/office/desk-systems/ds23/>.

10.2 Technical specifications for the control unit

- ▶ The technical specifications for the SMARTneo control unit can be found on the DewertOkin website at <https://www.dewertokin.com/products/office/control-units/smartneo/>.

10.3 Technical specifications for the lifting columns

- ▶ The technical specifications for the DD lifting columns can be found on the DewertOkin website at <https://www.dewertokin.com/products/office/lifting-columns/>.

11 Disposal

11.1 Packaging material

The packaging material should be sorted into recyclable components and then disposed of in accordance with the appropriate national environmental regulations (in Germany according to the recycling law KrWG from 01.06.2012; internationally according to the EU Directive 2008/98/EC (Waste Framework Directive WFD as of 12.12.2008)).

11.2 Drive components

The DS2 system consists of electronic components, cables and metal and plastic parts. You should observe all corresponding national and regional environmental regulations when disposing of the system.

The disposal of the product is regulated in Germany by Elektro-G, internationally by the EU Directive 2012/19/EC (WEEE), or by any applicable national laws and regulations.



The DS2 system components should not be disposed of with normal household waste!

Declaration of incorporation/installation

According to Appendix II of the EU Machinery Directive 2006/42/EC

The manufacturer:

DewertOkin GmbH
Weststrasse 1
32278 Kirchlengern,
Germany

declares that the incomplete machine:

DS2 system

comply with the following basic requirements of the Machinery Directive (2006/42/EC):

Sections: 1.1.3; 1.3.3; 1.3.4; 1.3.7; 1.5.1; 1.5.2; 1.5.5; 1.5.6; 1.5.7; 1.5.8;
1.5.9; 1.5.10; 1.5.13

Based on:

- DIN EN 527-1:2011
- DIN EN 527-2:2017

You may only operate this machine after you have confirmed that the end product (into which this drive will be installed) complies with the Machinery Directive 2006/42/EC.

On request, the manufacturer is obliged to send the special documentation accompanying the partially completed machinery electronically to the appropriate national institution.

The special technical documents corresponding to the machine have been created according to Appendix VII, part B.

The following party is responsible for the technical documentation:

DewertOkin GmbH
Weststrasse 1
32278 Kirchlengern,
Germany

Kirchlengern, Germany, the 1 of April, 2021

Dr. Josef G. Gross
Managing Director

EU Declaration of Conformity

In compliance with Appendix IV of the EU EMC Directive 2014/30/EU

In compliance with Appendix IV of the EU Low Voltage Directive 2014/35/EU

According to Annex VI of the RoHS Directive 2011/65/EU (incl. Delegated Directive (EU) 2015/863)

The manufacturer:

DewertOkin GmbH

Weststrasse 1

32278 Kirchlengern,

Germany

declares that the following product

DS2 system with a DewertOkin drive system^{1) 2)}

meet the requirements of the following EU directives:

Electromagnetic Compatibility Directive 2014/30/EC

Low Voltage Directive 2014/35/EC

DELEGATED DIRECTIVE (EU) 2015/863 FROM THE COMMISSION on 31 March 2015 to amend Annex II to Directive 2011/65/EU of the European Parliament and of the Council regarding the list of restricted substances

Applied standards:

- EN 60335-1:2012/A11:2014
- EN 55014-1:2006/A1:2009/A2:2011
- EN 55014-2:1997/A1:2001/A2:2008
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 62233:2008

This declaration of conformity is no longer valid if constructional changes are made which significantly change the control unit (i.e., which influence the technical specifications found in the instructions or the intended use)!

Kirchlengern, Germany, the 1 of April, 2021 Dirk Flören

Managing Director

¹⁾ DESKFRAME DS2 includes:

- SMARTneo control unit
- One of following handsets: Motion Assist, HSCO, HSU, TOUCHbasic, TOUCHfx, TOUCHbasic-inlay or TOUCHinlay, TOUCHdown, TOUCHinlay
- Two DD lifting columns

